Postings: from the desk of Jim Brodrick

Happy New Year!

This time of year always prompts a certain amount of anticipation as we look forward to a new year, as well as some reflection on the events of the past year. All things considered, 2009 was another good year for solid-state lighting (SSL). The technology continues to evolve at a rapid pace, and the progress has been exciting. Whereas in 2008 there were a few excellent and truly viable SSL general-illumination products on the market, along with many that performed poorly, in 2009 we saw an acceleration in the market introduction of good products.

DOE CALiPER testing of commercially available products shows considerable improvement over what was available a year ago, with more LED products that can legitimately compete with the incumbent technology they are designed to replace. While we still have a ways to go overall to close the performance gap between the best and worst products tested, the overall trend is significant and encouraging, and it's clear that CALiPER testing has contributed on a number of fronts. In addition to providing a series of "snapshots" of industry progress, it offers specific product information to help buyers make the right choices, as well as valuable feedback that pushes manufacturers to make needed improvements.

A key SSL development in 2009 was the first L Prize℠ entry, an LED replacement for the 60-watt incandescent bulb from Philips Electronics. This first entry is a clear signal that widespread use of solid-state lighting is rapidly moving within our reach. The L Prize

bar is set extremely high, and the winning product in the 60-watt category must demonstrate efficacy > 90 lm/W, lifetime > 25,000 hours, and energy consumption < 10 watts. The Philips entry is currently undergoing performance testing, and field assessments will begin in a few months.

Equally significant is the ripple effect we are beginning to see, based on the principle that "a rising tide lifts all boats." That is, just knowing that their products will be competing on retail shelves side-by-side with the L Prize winner serves to motivate manufacturers to improve the quality of their LED replacement products. We're starting to see signs of this trend in the marketplace, and hope to see more in 2010.

Contributing in no small way to the rising tide is the Lighting Facts℠ pledge program. After just one year, more than 225 manufacturers have taken the pledge, agreeing to have their products tested to LM-79, to submit their test reports verifying the data, and to use the Lighting Facts label to convey the performance results. More than 250 products bearing this label can be found listed on the Lighting Facts website.

At the same time, more than 55 retailers and distributors, and more than 50 utilities and lighting design firms, have pledged to look for and use products that have the label, which helps them identify the best lighting options. These buyers send a powerful message – that they do their homework before selecting LED lighting products – and their numbers are growing at a rapid pace.

Another key development in 2009 was the launch of DOE's SSL manufacturing R&D initiative. As SSL technology evolves, new challenges emerge that require a fresh approach and focus on manufacturing issues. The DOE initiative has two primary goals: to enhance product consistency and quality, and to accelerate cost reductions through manufacturing improvements. A third objective is to encourage domestic U.S.–based manufacturing of SSL products.

The initiative kicked off in 2009 with a series of workshops that resulted in the September publication of a SSL Manufacturing R&D

Roadmap, which reflects industry consensus on the expected evolution of SSL manufacturing, best practices, and opportunities for improvement and collaboration. The roadmap is an extension of the DOE SSL R&D Multiyear Plan, which for years has guided DOE efforts to accelerate the development and market introduction of high-efficiency, high-performance SSL products. DOE issued the first manufacturing solicitation in 2009, and we expect to announce the first round of selections any day now.

DOE's R&D program has been a driving force in advancing the science and engineering behind LED and OLED technology, and I encourage you to attend the seventh annual DOE SSL R&D workshop, which will be held February 2-4 in Raleigh, N.C. There's still time to register. These workshops attract leading scientists and lighting experts from across the country, who gather to share insights and perspectives on this fast-moving technology. To learn more about the Raleigh workshop, or to register, visit www.ssl.energy.gov/raleigh2010.html.

In 2010, I look forward to more groundbreaking SSL technology advances, as well as more high-quality SSL products appearing on the market. We plan to expand our current DOE programs to advance SSL adoption, and to develop and launch some new efforts (more details will follow in the coming weeks). The success of our efforts is dependent in large part on the support of our partners, and on behalf of DOE, I thank you all for your continued commitment and support.

As always, if you have questions or comments, you can reach me at postings@lightingfacts.com.